ORCHID STUDIES

II. Notes on Grammatophyllum Blume - 1

- Alex D. Hawkes -

The orchidaceous genus Grammatophyllum was erected by Blume in the year 1825 (BIJDRAGEN, 378, t.20), the type species, G. speciosum Bl., coming from the vicinity of Buitenzorg, in Java. Since that time a large number of specific epithets have been added to the aggregation, the true identity of many of which is vague. The purpose of these notes on the genus is to attempt to clarify this confusion, with an eventual monographic treatment of the group in view.

Two species of Grammatophyllum are now commonly cultivated in this country, particularly in Florida, where they form some of our most highly prized orchids, in both amateur and commercial collections. They are discussed herewith. Grammatophyllum speciosum Bl., rarely cultivated here, will be taken up in a subsequent paper in this series.

Grammatophyllum Measuresianum Weathers in GARD. & FOR. 2 (1889) 524.

G. "grandiflorum" Hort., ined. (cf., "The Identity of Grammatophyllum "grandiflorum"", AMER.ORCH.SOC.BULL. 18(1949) 608-10).

Pseudobulbs caespitose, very large, ellipsoidal to ovoid, slightly furrowed with age, somewhat compressed laterally, to 30 cm long, to 8 cm broad, about 6 cm thick, bearing usually 5 apical and basal leaves. Leaves very large, leathery, elliptic-oblanceolate, obtuse to acutish, narrowed below, to 60 cm long, to 12 cm broad, venose, with a prominent stiff midrib. Inflorescence basal, stiffly erect, to 3 m high, bearing up to 50 flowers. Floral bracts brown, scarious, 12 X 4.5 mm when expanded, ovate, acutish. Pedicellate ovary almost straight, ivory-white, shaded with green toward flower, 6.5 cm long, 2.5 mm thick. Flowers dimorphic, rather waxy in texture, opening fully, faintly fragrant at times, very showy, 5 cm across in nature, 7.5 cm with petals expanded, cream-yellow with irregular spots and blotches of dark blackish-brown, with big single blotches at apex of sepals. Dorsal sepal thrust forward over column and lip, almost touching the erect lateral lobes of the labellum, apex and upper edges retrorse, undulate, concave below, 44 mm long, 16 mm broad, elliptic, acute-acuminate, with several darker veins. Lateral sepals very undulate, apex retrorse, 40 mm long, 13 mm broad, elliptic, acute, with a single prominent vein. Petals with outer third reflexed, 41 mm long, 11 mm broad, oblong-lanceolate, acutish, somewhat undulate, slightly falcate, with one prominent vein, narrowed to 2.5 mm broad at base. Lip trilobate, joined to column-foot, lateral lobes erect and enclosing the column, mid-lobe pendent and thrust forward slightly, 22 mm long, 21 mm broad, both when expanded; lateral lobes

erect, elliptic, truncate, minutely denticulate, pubescent below, yellowish, with six light brown veins which are branched at the ends, edged with light brown, with a narrow ovatish whitish callus in the middle, pubescent, spotted inside with dark brown, 1 cm long, 2 mm wide below the middle, deeply grooved down center; mid-lobe 11 mm long from apex of callus, with a raised area at edge of lateral lobes about 2 mm high, pubescent basally, ovate, acutish, white with three dark brown curved lines, the middle one of which branches towards apex, raised area with slender groove in center. Column erect, arcuate, 16 mm long, about 3.5 mm broad below anther, white, marked and spotted with red-purple, especially around anther; pollinia 2. Capsule pendent, somewhat trigonate, oblong.

Philippine Islands: Mindoro, Lumbucan, Palawan.

This spectacular large-flowered species, now common in cultivation, particularly in Florida, will perhaps prove to be conspecific with Grammatophyllum Fenzlianum Rchb.f. It is a member of the section Gabertia, which also includes the following species.

Grammatophyllum scriptum (L.) Blume Rumphia 4 (1848) 48.
Epidendrum scriptum L. Sp. Pl. ed.2 (1763) 1351.
Cymbidium scriptum Sw. in Schrad. Journ. Bot. 2(1799) 218.
Vanda scripta Spreng. Syst. Veg. 3 (1826) 719.
Gabertia scripta Gaud. in Freyc. Voy. Uranie et Phys. (1829) 173, p.p. et quoad syn., non Bl.
Grammatophyllum speciosum Ldl. Gen. & Sp. Orch. Pl. (1833) 173, p.p. et quoad syn., non Bl.
Ophrys cernua Blanco Fl. Filip. (1837) 639, as Ophiris, non L.
Grammatophyllum multiflorum Ldl. in Bot. Reg. 24 (1838) Misc. 46.
Grammatophyllum multiflorum Ldl. var. tigrinum Ldl. in Bot. Reg. 28 (1842) t.69.
Grammatophyllum Boweri F.v.Muell. in Wing South. Sci. Rec. (1883).
Grammatophyllum leopardinum Rchb.f. in Flora 71 (1888) 151.
Grammatophyllum Seegerianum Hort. ex Gard. Chron., s.3, 10 (1891) 49, nomen.
Grammatophyllum Guilielmi-Secundi Krzl. in Gartenfl. 43 (1894) 114.
Grammatophyllum scriptum (L.) Bl. var. Boweri Schltr. in Fedde Repert. Beih. 1 (1913) 951.

Pseudobulbs yellow-green, caespitose, large, to 20 cm high, 6 cm broad, 4 cm thick, ovoid, with 2-5 large leaves at apex and a few scarious sheath-remnants above joints. Leaves articulated, leathery, elliptic-lanceolate, venose, wavy, acutish, to 50 cm long, 5-8 cm broad at middle, narrowed somewhat toward base. Inflorescence basal, erect to strongly arcuate or pendent with weight of numerous blossoms, to 1.5 m long, bearing up to 100 flowers, often several produced by each bulb. Pedicellate ovary whitish-green, becoming green at base of flower, arcuate above, 4.5 cm long, 2.5-3 mm thick. NORMAL FLOWERS: Flowers rather thick and waxy, 4.5 cm across unexpanded petals, rather campanulate, only the petals somewhat spreading, greenish-yellow with irreg-

ular dark brown blotches on the inner surface, more greenish outside, and blotches only partially visible, rather fragrant en masse but odorless separately. Dorsal sepal somewhat curved over column and lip, concave, elliptic-lanceolate, acutish, apex slightly upturned, 31.5 mm long, 12 mm broad at the middle, obscurely undulate. Lateral sepals thrust forward, slightly falcate, elliptic-lanceolate, acutish, more greenish than the other segments 28 mm long, 11 mm broad at middle. Petals spreading, rather falcate, oblanceolate, almost obtuse, 29 mm long, 9.5 mm broad above the middle, narrowing basally, obscurely undulate, with the blotches more spot-like and regular than sepaline markings. Labellum jointed to column-foot, 11 mm long from joint to base of pendent mid-lobe, prominently trilobate, not as thick as other segments; lateral lobes partly enclosing column, erect, whitish-yellow, with several anastomosing brown veins, pubescent below, minutely dentate and undulate on forward edges, ovate-lanceolate, obtuse, 16 mm long, about 9 mm wide, with a grooved pubescent white and yellow callus between the two lobes with obscure brown dots and lines; middle lobe pendent or down-curved, pubescent above, 11 mm long from apex of callus, 5.5 mm broad, yellowish-white, with three dark brown median veins which become thickened apically, and a single similar line on each edge, apex yellow, rotund-ovate, acute; entire lip 13 mm long when expanded, 20 mm wide. Column arcuate, erect, white, marked with red-brown anteriorly and posteriorly, 14 mm long, the foot 1.5 mm long, with a minute yellow depression back of it. ABNORMAL (DIMORPHIC) FLOWERS: Flowers borne singly or in pairs at base of flower-bearing portion of inflorescence, 5 cm across, more rigid in texture than normal flowers, not opening fully, greenish-yellow, with irregular very dark brown splotches and spots. Differing principally from normal flowers in complete absence of labellum. Dorsal sepal 32 mm long, 11.5 mm broad, otherwise like normal form. Petals calyptrate at apex, not falcate, 31 mm long by 9 mm broad, not undulate, otherwise same as typical phase. Lip totally absent. Column very arcuate, about 11 mm long, the foot aborted into a bilobed slightly thickened area less than 1 mm long at column-base.

Philippines, where it is common, highly variable, and widely distributed from sea level to more than 500 m altitude. Also in Amboina, Ternate, Celebes, Borneo, and New Guinea, and the Solomon Islands.

This exceedingly attractive and spectacular species, now common in cultivation, particularly in Florida, often bears several thousand flowers on each specimen. It is a member of the section Gabertia, as is the initial species of this paper, and is as yet still incompletely understood. Its extremes of variance, coupled with distribution over a prodigious area in the Indonesian region, make for a highly polymorphic concept, which will only become understood and properly delimited upon the study of greatly increased wild collections, and further inspection of cultivated material.

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